ABAGYAN, G.V.; BAYATYAN, G.L.; MATOYAN, D.S.; MELIKYAN, E.G.

Semiautomatic computor of second differences. Prib.i tekh.eksp. no.4:131-132 Jl-Ag '60. (MIRA 13:9)

1. Yerevanskiy gosudarstvennyy universitet.
(Calculating machines)

AVAKYAN, R.O.; BAYATYAN, G.L.; VISHNEVSKIY, M.Ye.; PUSHKIN, Ye.V.

Measurement of longitudinal electron polarization in the β-decay of Au^{198}. Zhur.eksp.i teor.fiz. 41 no.3:681-682 S '61. (MIRA 14:10)

(Electrons—Scattering) (Gold—Decay)

L 6778-65 EWT(m)/T/EWA(h) IJP(c)/AFMDC/ASD(a)-5

ACCESSION NR: AP4044672 S/0120/64/000/004/0087/0089

AUTHOR: Bayatyan, G. L.; Zel'dovich, O. Ya.; Landsberg, L. G.

TITLE: Gas threshold Cerenkov counter functioning in a wide angular range

SOURCE: Pribory* i tekhnika eksperimenta, no. 4, 1964, 87-89

TOPIC TAGS: Cerenkov counter, gas counter, threshold counter, particle counter

ABSTRACT: A new particle counter is described which is intended for studying π-p scatter in the experimental separation of π-mesons from protons within 1—4 Gev/s; the counter produces anticoincidence signals when π-mesons, scattered by a target within 15-20°, pass through it. The design features of the counter are illustrated in Enclosure 1. The freon-13 filled counter was tested with a π^--meson beam taken from an ITEF 7-Gev accelerator. By a proper selection of pressure, the inefficiency of the counter could be reduced to 0.9% for

Card 1/4

L 6778-65

ACCESSION NR: AP4044672

6

π^--mesons with 1.5-Gev/s or 0.3% for 3 Gev/s. The efficiency of the Cerenkov counter connected for coincidence with scintillation counters is within the plateau, 99.4%. "The authors wish to thank A. I. Alikhanov for his attention, N. G. Petrov and M. N. Porubay for their part in designing the counter, and also Yu. V. Fadeyev for his help in the work." Orig. art. has: 5 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics, GKAE). Fizicheskiy institut AN ArmSSR (Physics Institute AN ArmSSR)

SUBMITTED: 14Aug63 ENCL: 02

SUB CODE: NP NO REF SOV: 001 OTHER: 000

Card 2/4

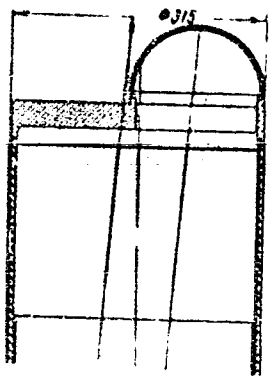
L 6778-65

ACCESSION NR: AP4044672

ENCLOSURE: 01

Gas threshold Cerenkov counter

1 - 2 - plane mirrors
3 - cylindrical mirrors
4 - 5 - lenses
6 - FEU-24 multiplier phototube
7 - magnetic shields



(continued to Encl. 02)

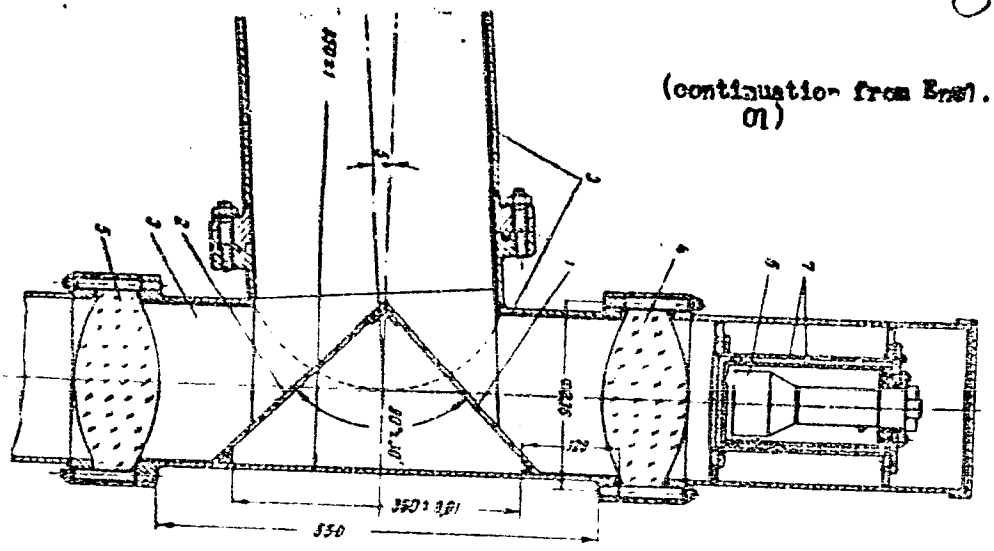
Card 3/4

L 6778-65

ACCESSION NR: AP5044672

ENCLOSURE: 02

(continuation from Encl. 01)



Card 4/4

L 65207-65 EWT(m)/T/EWA(m)-2

ACCESSION NR: AP5021735 UR/0386/65/002/002/0090/0094

AUTHOR: Alikhanov, A. I.; Bayatyan, G. L.; Brakhman, E. V.; Galaktionov, Yu. V.; Yeliseyev, G. P.; Yech, F. A.; Zel'dovich, O. Ya.; Landsberg, L. G.; Lyubimov, V. A.; Nikonov, I. V.

TITLE: Elastic backward scattering of π-mesons by neutrons in the 1.4-4.0 Bev/s pulse range

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 2, 1965, 90-94

TOPIC TAGS: pi meson, particle scatter, neutron scattering

ABSTRACT: The elastic backward scattering reaction $\pi^- + n \to \pi^- + n$ is studied in the 1.38-4.05 Bev/s pulse range. 1700 events of this reaction were selected with a pion scattering angle of >90°. The solid angles for these events were measured (accuracy of measurement in the horizontal plane was 1° and in the vertical plane--5°). The results are given in graphic and tabular form. Orig. art. has: 3 figures, 1 table.

ASSOCIATION: none

Card 1/2

L 65207-65

ACCESSION NR: AP5021735

SUBMITTED: 02Jun65 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 000

Card 2/2

L 30993-66 EWT(m)/T

ACC NR: AT6002498 SOURCE CODE: UR/3138/65/000/350/001/0012

AUTHOR: Alikhanov, A. I.; Bayatyan, G. L.; Brakhman, E. V.; Eliseev, G. P.; Galaktionov, Yu. V.; Landsberg, L. G.; Lyubimov, V. A.; Sidorov, L. V.; Zeldovich, O. Ya.; Yetch, F. A.

ORG: none

48
Br 1

TITLE: π^- - meson-neutron elastic backward scattering at 1.4-4.0 bev/c

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady, no. 350, 1965. Pi sup minus-meson-neutron elastic backward scattering at 1.4-4.0 Bev/c, 1-12

TOPIC TAGS: pion scattering, neutron scattering, elastic scattering, scattering cross section, angular distribution, spark chamber

19, 55

ABSTRACT: The authors study the elastic backward scattering reaction

$$\pi^- + n \to \pi^- + n$$

in the 1.38-4.05 bev/c range. A spark chamber was used with photographic and neutron counter registration. The experimental installation was highly efficient in

Card 1/2

2

ACC NR: AT6001620 SOURCE CODE: UR/3138/65/000/373/0001/0016

AUTHOR: Bayatyan, G. L.; Galaktionov, Yu. V.; Zel'dovich, O. Ya.; Landsberg, L. G.

ORG: [Bayatyan] Institute of Physics GKIAE, Yerevan (Institut fiziki GKIAE, Yerevan)

TITLE: Large scintillation counters and counters for operation in magnetic fields

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady, no. 373, 1965. Bol'shiye stsintillyatsionnyye schetchiki i schetchiki dlya raboty v magnitnykh polyakh, 1-16

TOPIC TAGS: scintillation counter, photomultiplier, STRONG magnetic field, light wave

ABSTRACT: Large scintillating counters and long light guides are essential for work in the area of strong magnetic fields. The authors have tested a variety of such counters in their experiments. The counters differed in shape and size of the crystals and length of light guides. In the case of each counter the authors determined the dependence of its effectiveness on the voltage of the photomultiplier and, in some cases, on the area of passage of particles through the scintillator. Measurements were conducted by studying cosmic rays and a beam generated by the ITEF accelerator under high load conditions. The signals from the counters entered the high-speed coincidence circuits. The resolution period of the circuits

Card 1/2

ACC NR: AT6001620

was 10-15 n sec. From the outputs of these circuits the standard signals proceeded to a slow coincidence circuit, which had a resolution of 10^{-7} sec. and an effectiveness of 100%. The experiments were conducted with large dimension counters, counters operating in strong magnetic fields, and counters with magnetic field compensation. Measurements of the amplitude spectrum of signals from the multipliers, taken with the magnetic field turned on and off, have shown that the activation of the magnetic field results only in an insignificant shift of the spectrum toward lower amplitudes (by 15-20%). The authors thank V. A. Lyubimova for her useful evaluations and Yu. V. Devyatikh, E. A. Strel'nikov, and V. D. Tarasova for their participation in the measurements. Orig. art. has: 1 formula, 2 tables, and 7 figures.

SUB CODE: 18 / SUBM DATE: 26Jul65/ ORIG REF: 003/ OTH REF: 000

Card 2/2

L 45992-66 EWT(l)/EWT(m)/T IJP(c) WW

ACC NR: AP6030128 SOURCE CODE: UR/0120/66/000/004/0056/0059

AUTHOR: Bayatyan, G. L.; Galaktionov, Yu. V.; Zel'dovich, O. Ya.; Landsberg, L. G.

ORG: [Bayatyan] Institute of Physics GKAE, Yerevan (Institut fiziki GKAE); Institute of Theoretical and Experimental Physics GKAE, Moscow (Institut teoreticheskoy i eksperimental'noy fiziki GKAE)

TITLE: Large scintillation counters and counters intended for operation in magnetic fields

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1966, 56-59

TOPIC TAGS: scintillation counter, particle counter

ABSTRACT: The results are reported of testing (a) large (up to 700 x 350 x 15 mm) scintillation counters with one photomultiplier and (b) long-lightguide counters capable of operating in strong magnetic fields. The large counters with 190--250-mm lightpipes were illuminated by a gamma beam from Cs^{137}; the irregularity of light collection was found to be 40% or less. The effect of the scintillation-crystal shape on the efficiency of particle recording was also explored. In the second type of counters, the ambient magnetic field was eliminated by either a compensating magnetic field derived from a special solenoid or by using lightguides long enough (1500--1800 mm) for locating the photomultiplier in a (50--100-oe) region permitting

Card 1/2 UDC: 539.1.074.3

PIGUZOV, Yu.V.; BAYAZITOV, M.I.

Investigating the temper brittleness of high chromium steel by the internal friction method. Izv.vys.ucheb.zav.; chern. met. no.3:147-152 '60. (MIRA 13:4)

1. Moskovskiy institut stali.
(Chromium steel--Brittleness) (Internal friction)

GLADKOVSKIY, V.A.; MOROZOV, A.N.; STROGANOV, A.I.; VACHUGOV, G.A.;
Prinimali uchastiye: BELOV, B.V., inzh.; POPOV, N.P., inzh.;
BAYAZITOV, M.I., inzh.

Effect of work hardening on the properties of structural steel. [Sbor. trud.] Nauch.-issl.inst.met. no.4:144-150 '61. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut metallurgii (for Gladkovskiy, Morozov, Stroganov). 2. Zlatoustovskiy metallurgicheskiy zavod (for Vachugov).
(Steel, Structural—Hardening)

BAYAZITOV, M.I.; KOCHNOV, V.Ye.

Investigating cold-rolled transformer steel by the internal friction method. Fiz.met.i metalloved. 15 no.1:113-118 Ja '63. (MIRA 16:2)

1. Chelyabinskiy institut metallurgii.
(Sheet steel—Magnetic properties) (Internal friction)

KOCHNOV, V.Ye.; BAYAZITOV, M.I.

Solubility of nitrogen and carbon in cold-rolled transformer steel. Fiz. met. i metalloved. 15 no.6:937-941 Je '63. (MIRA 16:7)

1. Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii.
(Steel—Inclusions) (Solubility)

BAYAZITOV, M.I.; KIDIN, I.N.; PIGUZOV, Yu.V.

Diffusibility of carbon in alpha-iron. Izv. vys. ucheb. zav.; chern. met. 8 no.7:137-140 '65. (MIRA 18:7)

1. Moskovskiy institut stali i splavov.

L 12171-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) JD

ACC NR: AP6000176 UR/0148/65/000/009/0155/0157

AUTHOR: Bayazitov, M. I.; Kidin, I. N.; Piguzov, Yu. V.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Effect of lattice defects on the solubility of carbon in Alpha-iron

SOURCE: IVUZ. Chernaya metallurgiya, no. 9, 1965, 155-157

TOPIC TAGS: lattice defect, alpha iron, carbon, solubility, internal friction, electric resistance, solid solution

ABSTRACT: To fill the gap in knowledge of the effect of dislocation density on the solubility of C at high temperatures, which is one of the factors determining proneness to aging in low-carbon steels when rapidly cooled from these temperatures, the authors investigated the effect of various dislocation densities on the solubility of C in the lattice of α-iron at elevated temperatures. Specimens of steel containing 0.01, 0.04 and 0.15% C were subjected to dilatational strain (1 to 10% elongation) in order to produce various dislocation densities. After quenching from 600°C, the solubility of C in the lattice of α-iron was determined by investigating: internal friction, electric resistance (at liquid-nitrogen temperature) and coercive force. Findings: At 300°C the background of internal friction increases, which indicates that the high-temperature curve of internal friction is displaced in the direction of low temperatures for specimens deformed more than 5%, which may be attributed to the con-

Card 1/3 UDC: 669.111.4:620.18:539.67

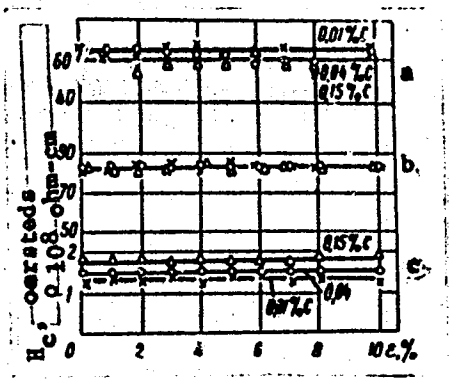


Fig. 1. Height of the 40-degree maximum of internal friction, electric resistance and coercive forces as a function of degree of prior deformation.

comitant change in the kinetics of segregation of C from the solid solution. The height of the 40-degree maximum of internal friction, electric resistance, and coercive force measured after quenching of pre-deformed specimens from 600°C (Fig. 1) remain unaffected. Apparently the cyclic stresses applied to the specimen during the measurement of internal friction are too small to upset the equilibrium of the C atoms present in the dislocation zones near the grain boundaries. Part of the dissolved atoms will be arrayed in a more ordered manner in the neighborhood of lattice defects and thus reduce the height of the 40-degree maximum of internal friction. On the other hand, the temperature of treatment (quenching from 600°C) is sufficiently high to cause part of the C atoms bound in both the old defects (grain boundaries) and the new defects caused during deformation, passes into the solid solution. Thus it seems that these conditions of experiment result in a new equilibrium state of the solid solution, at which the C concentration and hence also all the physical characteristics investigated in this study differ little from the initial state. Orig. art. has: 3 figures.

SUB CODE: 11, 20/ SUBM DATE: 14May65/ ORIG REF: 006/ OTH REF: 003

BAYAZITOV, M.I.; PIGUZOV, Yu.V.

Effect of the grain size on the height of the 400 maximum of internal friction. Fiz. met. i metalloved. 20 no.4:632-634 O '65. (MIRA 18:11)

1. Moskovskiy institut stali i splavov.

BAYAZITOV, M.S., inzh.; VERBENKO, O.A., inzh.; POLYAKOV, V.Ye., kand.-tekhn.nauk, dotsent

Distance-type PZ-152 protection system with a.c. operative current. Izv. vys. ucheb. zav.; energ. 6 no.2:1-5 F '63. (MIRA 16:3)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova. Predstavlena kafedroy elektricheskikh stantsiy, setey i sistem.
(Electric power distribution) (Electric protection)

IVANOV, A.A.; LEVITSKIY, Yu.F.; BAYAZITOV, S.Kh.; BANCHENKO, M.S.

Geology and factors in the formation of the Starobin potassium salt deposit in White Russia. Trudy VSEGEI no.68:3-75 '61. (MIRA 15:8)

(Starobin region--Potassium salts)

MALEVANNYY, V.A.; BAYAZITOVA, A.I.

Colorimetric determination of aluminum in titanium dioxide.
Khim.volok no.4:25-26 '62. (MIRA 15:8)

1. Chelyabinskiy filial Gosudarstvennogo issledovatel'skogo i proyektnogo instituta khimicheskoy promyshlennosti.
(Aluminum—Analysis) (Titanium oxides)

MALEVANNYY, V.A.; Prinimali uchastiye: BANOKINA, K.I.; BAYAZITOVA, A.I.

Colorimetric determining of aluminum in titanium dioxide pigments. Lakokras.mat.i ikh prim. no.6:54-56 '62. (MIRA 16:1)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Aluminum--Analysis) (Pigments)

MAIEVANNYY, V.A.; ZHOLNIN, A.V.; Prinimali uchastiye: BANOKINA, K.I.; BAYAZITOVA, A.I.; SHUMINA, V.A.

Determination of dioxide ferric oxide and zinc oxide content in titanium. Khim. volok. no.6:67-68 '64.

(MIRA 18:1)

1. Chelyabinskiy filial GIMP.

БАУВА, N.S.

Russian literature on obstetrics and gynecology for the second quarter of 1953; continuation. Akush.i gin. no.6:86-90 N-D '53.
(MLRA 7:1)

(Bibliography--Obstetrics) (Obstetrics--Bibliography)
(Bibliography--Gynecology) (Gynecology--Bibliography)

BAYBA, N.S.

Russian literature on obstetrics and gynecology during the second quarter of 1955. Akush. i gin. 34 no.1:121-126 Ja-F '58.
(BIBLIOGRAPHY--GYNECOLOGY) (MIRA 11:4)

BAYBA, N.S., red.; LYUDKOVSKAYA, N.I., tekhn.red.

[Medical literature of the U.S.S.R.; index of books and articles for the first half of 1958] Nauchnaia meditsinskaia literatura SSSR; ukazatel' knig i statei za pervoe polugodie 1958 g. Sost. Bibliograficheskim otdelom GTsNMB. Pod red. N.S.Baiba. Moskva, Gos.izd-vo med.lit-ry Medgiz, 1960. 851 p.
(MIRA 13:12)

1. Moscow. Gosudarstvennaya nauchnaya meditsinskaya biblioteka.
(BIBLIOGRAPHY--MEDICINE)

BAYBA, V.A., inzh.

Automatic control of electric lighting in poultry houses. Mekh. i elek. sots. sel'khoz. 21 no.4:23-25 '63. (MIRA 16:9)

1. VNIPIsel'elektro.
(Poultry houses and equipment)

BAYBAK, G.S.

Redesigning the SM-558 unit for cleaning and oiling metal linings.
Stroi.mat. 7 no.8:32 Ag '61. (MIRA 14:8)

1. Glavnyy mekhanik Novorossiyskogo shifernogo zavoda "Kommunar".
(Asbestos cement) (Molding machines)

BAYBAK, P. (Lozovskiy rayon Khar'kovskoy oblasti)

Vigor of a Communist Youth League member. Radio no.7:14 Jl '65.
(MIRA 18:9)

BAYBAKOV, Aleksandr Borisovich; KATS, Revekka Samsonovna; OSTAF'YEV, A.I., red.; NOSAROV, M.F., red.; MONETA, A.A., red.; GAPON, G.I., red.; SNIGUR, Ye.Ya., red.; NOVIK, A.M., red.; MATUSEVICH, S.M., tekhn. red.

["Leninskaia Kuznitsa" Plant] Zavod "Leninskaia kuznitsa." Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1962. 172 p. (MIRA 15:3)
(Kiev--Machinery industry)

BAYBAKOV, A. B.

Baybakov, A. B. "Serial standard river wheel tugboats,"
Sudostroyeniye, 1948, No. 6, p. 12

SO: U-3264, 10 April 1953 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

BAYBAKOV, A. B.

IL'YENKO, M.S.; GREBENYUK, A.I.; NIKOL'SKIY, D.N.; STANISLAVSKIY, N.A., inzhener, redaktor; BAYBAKOV, A.B., laureat Stalinskoy premii, inzhener, retsenzent.

[Calculation and design of gears, worm gears and reduction gears; a handbook] Raschet i proektirovanie zubchatykh i cherviachnykh peredach i redukterov; spravochnoe rukovodstvo. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry. [Ukr. otd-nie] 1953. 589 p. (MLRA 7:7)

(Gearing--Handbooks, manuals, etc.)

Baybakov, A.B.

USSR/Engineering - Steam ships

Card 1/1 Pub. 128 - 9/32

Authors : Baybakov, A. B.

Title : New passenger steam ships, type "Yosif Stalin"

Periodical : Vest. mash. 11, 35-37, Nov 1954

Abstract : A description of river steam ships constructed during 1949-1950, in accordance with the Government Standard 3817-47 is presented, together with tables giving technical specifications. Illustrations.

Institution : ...

Submitted : ...

BAYBAKOV, A. B.

USSR/ Engineering - Book review

Card 1/1 Pub. 128 - 21/25

Authors : Baybakov, A. B., Engineer

Title : Unsuccessful book

Periodical : Vest. mash. 35/4, 87-89, Apr 1955

Abstract : Critical review is presented of the book by M. N. Brezhnev, entitled, "Major Mechanism of Inland Water Ships" (1953).

Institution : .....

Submitted : .....

BAYBAKOV, A.B.

AID P - 4475

Subject : USSR/Engineering

Card 1/2 Pub. 128 - 2/29

Author : Baybakov, A. B., Chief Designer of a Special Design Office (SKB)

Title : Some questions regarding the technical progress of river-boat construction.

Periodical : Vest. mash., #4, p. 7-12, Ap 1956

Abstract : The author claims that there is no unified plan for the design and construction of modern vessels for inland navigation (river and lake) as such plans are now worked out by both the Ministry of the River Fleet and the Ministry of the Shipbuilding Industry. He appeals for centralization of research institutes for the determination of types of vessels, types of machines (steam and Diesel), types of fuels, speed, etc., and asks the Centralization of Design and Construction Bureaus.

Vest. mash., #4, p. 7-12, Ap 1956 AID P - 4475

Card 2/2 Pub. 128 - 2/29

Institution : None

Submitted : No date

BAYBAKOV, O.B.; MOLOZHANOV, O.O.

Ships built in Kiev. Nauka i zhyttia 6 no.9:14-15 '56. (MIRA 13:5)

1. Glavnyy konstruktor zavoda "Lenins'ka kuznya" (for Baybakov).
(Kiev--Shipbuilding)

BAYBAKOV, A.B.

Standardization of ships used in inland navigation. Rech.transp. 15 no.8:10-12 Ag '56. (MLRA 9:11)

1. Glavnyy konstruktor TSentral'nogo konstruktorskogo byuro.

(Ships--Standards) (Inland navigation)

BAYBAKOV, A.B., inzh.

Movable docks used in inland navigation. Sudostroenie 24 no.12:14-15 D '58. (MIRA 12:2)
(Docks) (Inland navigation)

BAYTAKOV, A.B., inzh.

Outlook for free-piston gas generator used in ships for inland navigation. Sudostroenie 24 no.3:28-30 Mr '58. (MIRA 11:4)
(Marine gas turbines)

RAYBAKOV, A.B., inzh.

Development and volume of technical documentation. Sudostroenie 25 no.6:36-37 Je '59. (MIRA 12:9)
(Shipbuilding) (Mechanical drawing)

BAYBAKOV, A.

Controllable pitch propellers in the river fleet. Mech. transp. 19 no.10:42 O '60. (MIRA 13:11)

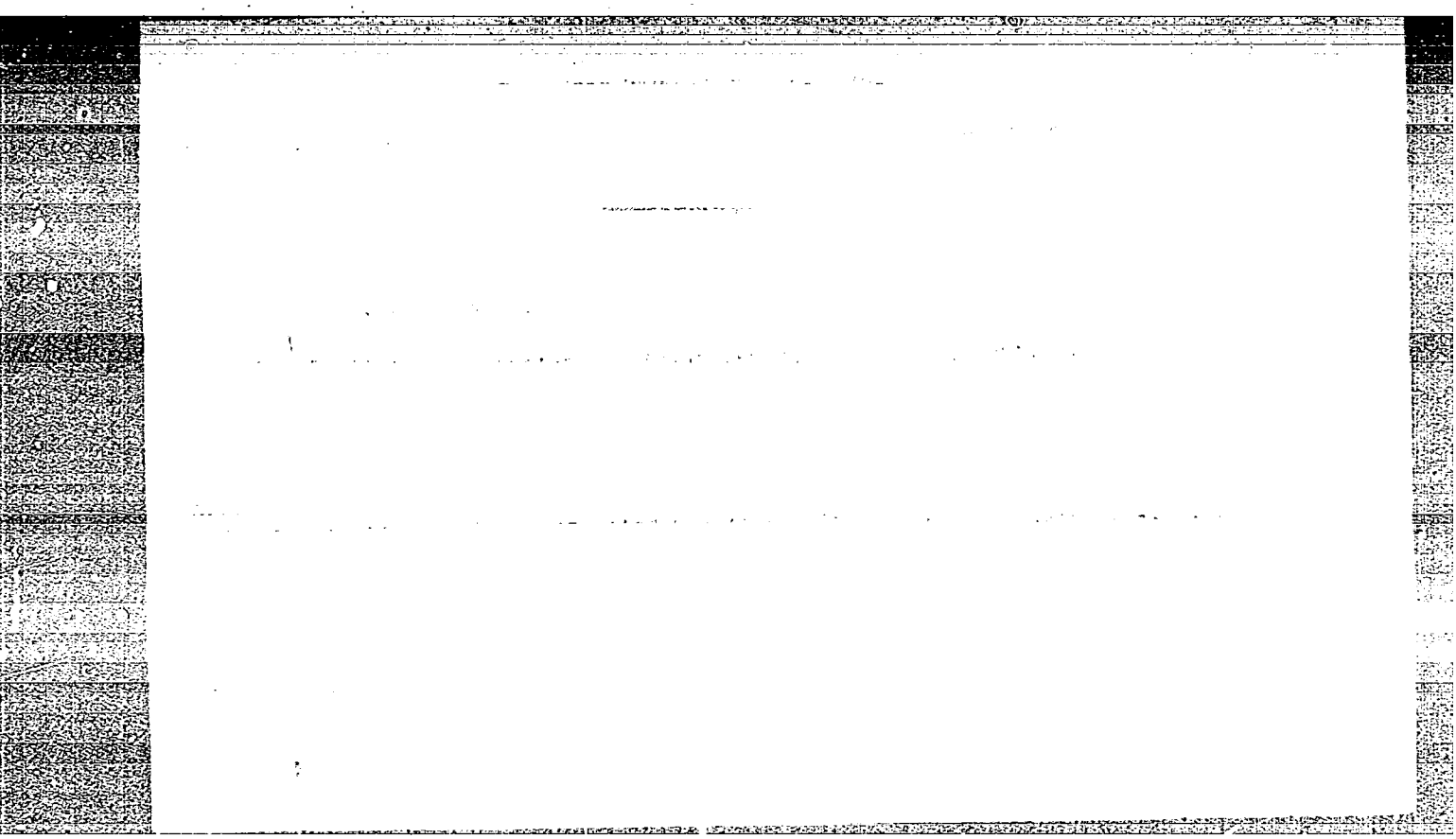
1. Glavnyy konstruktor TSentral'nogo konstruktorskogo byuro zavoda "Leninskaya kuznitsa."
(Propellers) (Inland navigation)

SHCHEGROV, L.N.; VIL'NYANSKIY, Ya.Ye.; BAYBAKOV, D.P.

Synthesis of the products of titanium tetrachloride hydrolysis.
Trudy IREA no.25:470-478 '63. (MIRA 18:6)

FARNIYEVA, O.V.; TKACHENKO, A.I.; RODIVILOVA, L.A.; BAYBAKOV, K.P.; VLASOVA, K.N.

Use of polyamide glues for assembling parts of shoe uppers. Kozh.-obuv. prom. no.8:17-20 Ag '59. (MIRA 13:1)
(Shoe manufacture)



APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000204020008-5"

BAYBAKOV, M.

"The Pre-Schedule Fulfillment of the Plan Should be Organized," Partiynaya Zhizn', No.6, pp. 18-25, March 1955

Summary of article - D 331098

BAYBAKOV, N.K.

USSR
Baku-Lenin District, Azerbaydzhan SSR.
Minister of Oil Industry, (1949).
"Oil Production," (Speech), 1949.

[redacted], M.

USSR
USSR Minister of Oil Industry. (1950).
"For Further Improvement of Oil Industry."
Izvest a, 1950.

[redacted], A.

USSR
USSR Minister of the Oil Industry
"Oil Worker Innovators in the Struggle for Technological Progress," Izvestia, June 2[redacted], 1950

BAYBAKOV, N.

Petroleum Engineering

Further development of the petroleum industry, Plan, khoz., No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress July 1952 UNCLASSIFIED

BAIBAKOV, N. K.

Subject : USSR/Engineering AID - P-155

Card : 1/1

Author : Baybakov, N. K., Minister of the Oil Industry

Title : Further Progress in the Oil Industry

Periodical : Neft. khoz., v. 32, #1, 1-8, Ja 1954

Abstract : Progress report for 1953 presented by the Minister of the Oil Industry on first section of the Supreme Soviet of the USSR of the September Plenum of the Central Committee of the Communist Party of the Soviet Union (TsK KPSS). New developments for 1954 are outlined.

Institution: None

Submitted : No date

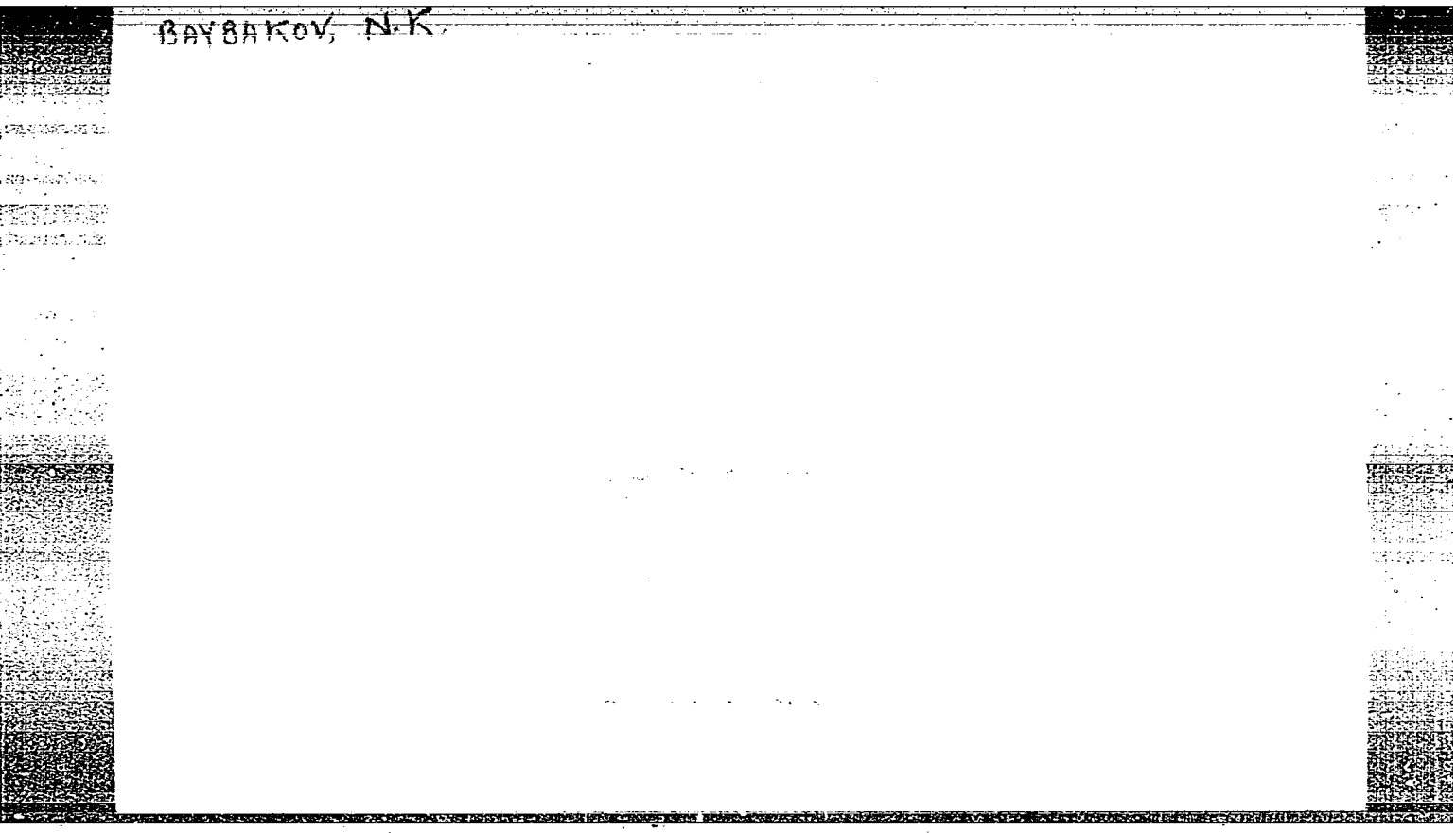
BABAKOV, N.K.

USSR.

1254. RESULTS FOR 1954 AND TASKS FOR THE (U.S.S.R.) PETROLEUM INDUSTRY IN 1955. Babakov, N.K. (Neft. Khoz. (Oil Ind., Moscow), Jan. 1955, 1-12). Production increased, largely as a result of new discoveries in the Ural-Volga region and in the Volga basin near Stalingrad. (L).

62

Trans - D 411564



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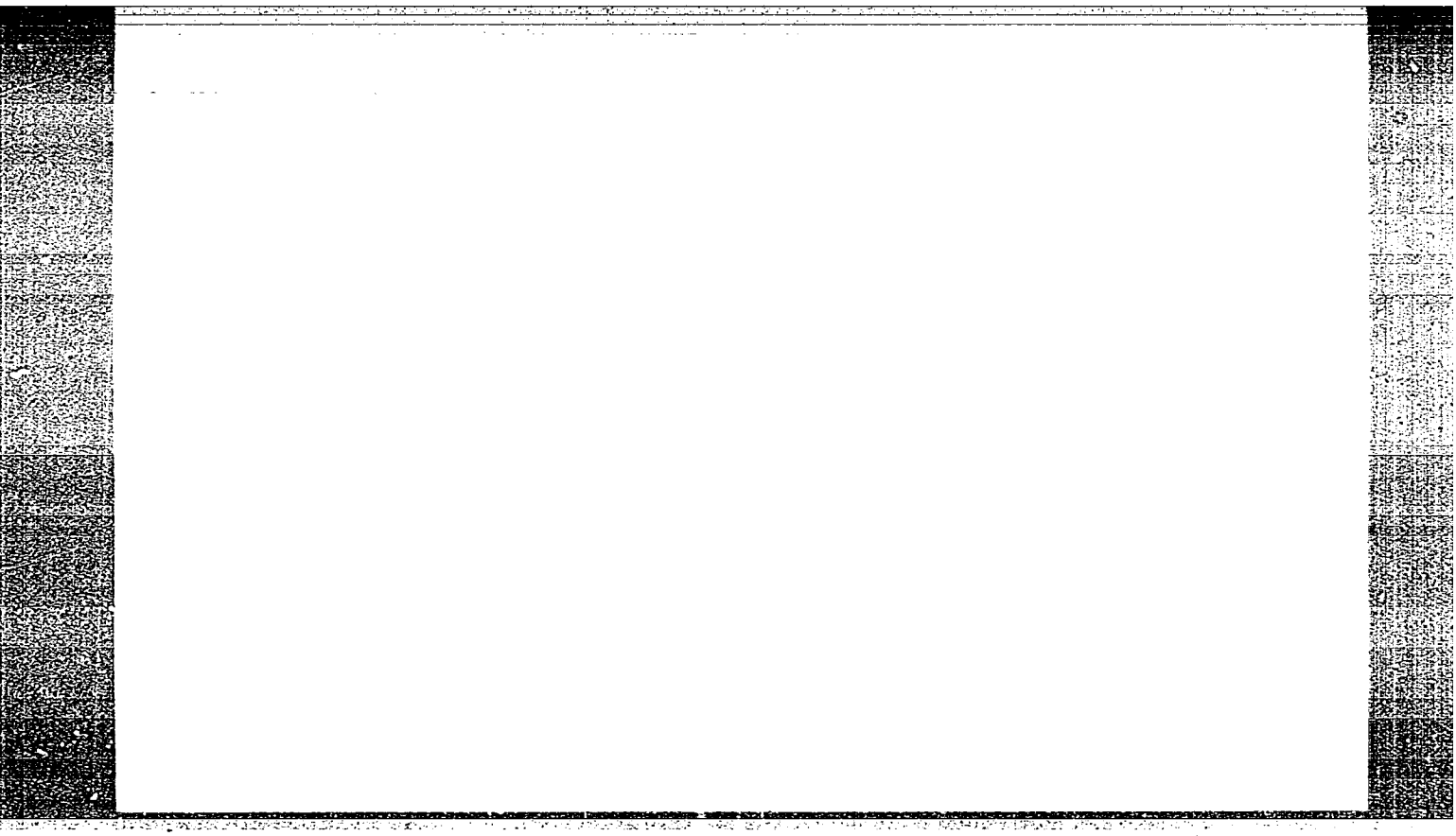

BAYBAKOV, N.K.

Results achieved by the Kuban petroleum and gas industries and plans for their development in 1960. Neft.khoz. 38 no.5:1-6 My '60. (MIRA 13:8)
(Kuban--Petroleum industry)
(Kuban--Gas, Natural)

BAYBAKOV, N.K.

For further progress of the petroleum and gas industries in the Kuban. Neft. khoz. 39 no.3:1-7 Mr '61. (MIRA 16:7)

(Kuban—Oil fields)
(Kuban—Gas, Natural)

BAYBAKOV, Nikolay Konstantinovich; MARKOS'YANTS, S.A., otv. red.; DUKHNO, V.I., tekhn. red.

[The Kuban makes strides toward the future] Kuban' shagaet v budushchee. Krasnodar, Krasnodarskoe knizhnoe izd-vo, 1963. 66 p. (MIRA 16:9)
(Kuban—Industries)

BAYBAKOV, N.K. Laureat Leninskoy premii

Great chemical industry and great petroleum industry. NTO 5 no.9:4-7 S '63. (MIRA 17:6)

1. Predsedatel' Gosudarstvennogo komiteta khimicheskoy i neftyanoy promyshlennosti pri Gosplane SSSR.

BAYBAKOV, N.K.; [illegible], V.A.

Development and technical progress in the gas industry of Krasnodar Territory. Gaz. delo no.6/7:3-12 '63.

(MIRA 17:10)

1. Gosudarstvennyy komitet khimicheskoy i neftyanoy promyshlennosti pri Gosplane SSSR i ob"yedineniye "Krasnodarneftegaz".

BAYBAKOV, N.K.

Chemistry and the petroleum industry. Nefteper. i neftekhim. no.1:3-7 '64. (MIRA 17:6)

1. Predsedatel' Gosudarstvennogo komiteta khimicheskoy i neftyanoy promyshlennosti pri Gosplane SSSR.

BAYBAKOV, N.K.

Chemistry and the petroleum industry. Mash. i neft. obor. no.1: 3-6'64 (MIRA 17:7)

1. Predsedatel' Gosudarstvennogo komiteta khimicheskoy i neftyanoy promyshlennosti pri Gosplane SSSR.

BAYBAKOV, N.K.

Most important segment of Soviet industry. Izv. vys. ucheb. zav.; neft' i gaz 7 no.9:4-5 '64. (MIRA 17:12)

1. Predsedatel' Gosudarstvennogo komiteta neftedobyvayushchey promyshlennosti, ministr SSSR.

BAYBAKOV, N.K.

Prospects for the development of the petroleum and chemical industries in the Soviet Union. Neft. khoz. 42 no.1:1-8 Ja'64. (MIRA 17:5)

BAYBAKOV, N.K.

Raise the economic level, improve the organization, planning, financing, and accounting of drilling operations for oil and gas. Neft. khoz. 42 no.6:1-7 Je '64. (MIRA 17:8)

1. Predsedatel' Gosudarstvennogo komiteta neftedobyvayushchey promyshlennosti pri Gosplane SSSR.

BAYBAKOV, N.K.

Centenary of the Soviet oil and gas industry. Neft. khoz. 42 no.9/10:3-12 S-O '64. (MIRA 17:12)

BAYBAKOV, N.K.; LAIKA, B.B.; TREBIN, F.A.

Overall solution of the problem of the development of a group of gas-condensate (gas) fields as a unit based on a study of fields in Krasnodar Territory. Gaz. prom. 10 no.6:5-12 '65.

(MIRA 18:6)

BAYBAKOV, N.M.

Drying oil-containing meats in the VIS-2 dryer. Khleb.i kond.prom. 1 no.6:37-38 Je '57. (MLRA 10:8)

1.Moskovskaya vitaminno-konditerskaya fabrika imeni Marata.
(Drying apparatus) (Oil seeds)

BAYDAKOV, G. V. Cand Tech Sci

Dissertation: "Whirling Pumps."

20/3/50

Moscow Order of the Labor Red Banner Higher Technical School imeni N. E. Bauman

SO Vecheryaya Moskva
Sum 71

Baybakov, O.V.

KUKOLEVSKIY, I.I., professor, doktor tekhnicheskikh nauk; BAYBAKOV, O.V., kandidat tekhnicheskikh nauk.

Special-profile screw pumps. [Trudy] MVTU no.18:5-27 '53.
(Pumping machinery) (MLRA 7:12)

KARAVAYEV, A.Ye., professor; BAYBAKOV, O.V., kandidat tekhnicheskikh nauk.

Pump laboratory at the Moscow Power Engineering Institute. Trudy MEI no.19:366-376 '56. (MLRA 10:1)
(Pumping machinery)

BAYBAKOV, Oleg Vladimirovich; ZEYGOFER, Oleg Iosifovich; KISELEV, P.G., red.; ZHIVOTOVSKIY, L.S., red.; VORONIN, K.P., tekhn. red.

[Hydraulics and pumps] Gidravlika i nasosy. Moskva, Gos. energ. izd-vo, 1957. 240 p. (MIRA 11:7)
(Pumping machinery) (Hydraulics)

24788
S/549/60/000/100/001/002
D210/D303

26.2141

AUTHOR: Baybakov, O.V., Candidate of Technical Sciences

TITLE: Cavitation of the outlet of a centrifugal pump

PERIODICAL: Gidromashinostroyeniye, no. 100, 1960, 56 - 62

TEXT: Performance tests were carried out on a centrifugal pump (specific speed n_s = 74; inlet head 5 m) at different speeds and then recalculated to one speed by proportionality formulae. Curves of efficiency η, hydraulic efficiency η_n (against flow through the working wheel Q_T), head H, power N (in metric hp) and hydraulic losses are shown in Fig. 1 plotted against flow Q(l/sec). They all correspond to speed n = 1450 rpm. It will be seen that curves of H, η, η_h and h_h obtained at different speeds diverge at flows exceeding design values, but curves of N and H_T coincide for all flow values. The reason for this is cavitation in the pump, but be-

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Cavitation of the outlet ...

cause N and H_T are unaffected, it cannot occur on the working wheel. The inlet to the diffuser is the most sensitive point. Due to large incidence angles at large flows, the stream breaks away from the blade, is compressed, accelerated and causes a local reduction in pressure. Cavitation starts when this pressure is reduced to the vapor pressure of the liquid p_o. Neglecting losses on the wheel, pressure at diffuser inlet p_4 can be found by Bernoulli. By putting $p_4 = p_o$, critical velocity v_4 can be determined:

$$H_T + \frac{p_B}{\gamma} + \frac{v_B^2}{2g} - \frac{p_o}{\gamma} = \frac{(\varphi v_{4cr})^2}{2g} \qquad (1)$$

where p_B and v_B - pressure and velocity at pump inlet; v_4 - mean velocity at diffuser inlet; φ - coefficient taking into account uneven velocity distribution at diffuser inlet and also correcting for the assumptions made further in this article. On the other hand

Cavitation of the outlet ....

$$v_4 = \frac{Q}{z_k a_0 b_3 s} \qquad (2)$$

where z_k - number of diffuser blades; a_0 - throat of diffuser channel; b_3 - width of diffuser; s - stream compression coefficient. Referring to Fig. 2 for a straight diffuser, the author obtains

$$\cos(\alpha_2 - \alpha_\beta) = \frac{1}{2}\left(\frac{v_2}{v_1} + \frac{v_1}{v_2}\right)\cos(\alpha_1 - \alpha_\beta) - \frac{1}{2}\left(\frac{v_2}{v_1} - \frac{v_1}{v_2}\right) \times \times \frac{\sin(\alpha_1 - \alpha_\beta)}{\operatorname{tg}\alpha_1}, \qquad (3)$$

and $$S = \frac{v_1 \sin\alpha_1}{v_2 \sin\alpha_2}.$$

It is assumed that this holds also for a circular diffuser, that

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Cavitation of the outlet ...

$\alpha_2 = \alpha_l$ and that all the angles are small. Then

$$S = \frac{1}{2 - \frac{\alpha_l}{\alpha_1}}. \qquad (4)$$

Angle α_1 is obtained from $tg\ \alpha_1 = v_{m3}/v_{n3}$, where $v_{m3} = Q/2\pi R_3 b_3 \psi_3$ - - radial velocity; R_3 - radius to diffuser inlet; ψ_3 - coefficient of compression at diffuser inlet. The tangential velocity is $v_{n3} = K_2/R_3$ where K_2 - moment of speed at wheel outlet. Therefore,

$$tg\ \alpha_1 = \frac{Q}{2\pi K_2 b_3 \psi_3}. \qquad (5)$$

Critical conditions can be determined by means of Eqs. (1), (2), (4) and (5). These were calculated for several wheel diffuser combinations and coefficient φ was found to vary between 1 and 1.25. Cavitation may occur even with high inlet heads. The critical flow

Card 4/7

Cavitation of the outlet ...

can be found graphically as follows: Function A(Q) given by

$$A(Q) = \frac{(\varphi v_{4cr})^2}{2g} = H_T + H_a - H_B^{cr}, \qquad (6)$$

where $H_a = \frac{p'}{\gamma} - \frac{p_o}{\gamma}$ available head at delivery level, p'-pressure in the delivery tank; H_B^{cr} - critical suction head. It will be seen from Eq. (4) that steam compression s and, therefore, critical flow increase as blade angle α_l increases. To widen the working range of pumps positive incidence angles at the diffuser should be used. Investigations of I.V. Davydov showed that the use of large positive incidence angles at diffuser has little effect on the pump characteristics. There are 3 figures, 1 table and 1 Soviet-bloc reference.

Card 5/7

76.2141

24789
S/549/60/000/100/002/002
D210/D303

AUTHOR: Baybakov, O.V., Candidate of Technical Sciences

TITLE: Vortex pumps

PERIODICAL: Gidromashinostroyeniye, no. 100, 1960, 63 - 98

TEXT: A vortex pump is first described. Compared to centrifugal pumps, vortex pumps are simpler, cheaper, more compact (give 2 to 5 times higher pressure for the same size), and are less sensitive to variations in delivery pressure. They are or can be made self-sucking. Their disadvantage is low efficiency, not exceeding 45 % (usually 35 - 38 %) for which reason they are not used with high powers or for continuous running. Vortex pumps are made for flows up to 12 l/sec and pressures up to 250 m. Their powers can reach 25 kW and the specific speed n_s = 6 to 50. They are not suitable for pumping viscous (above 15°E) fluids or fluids containing abrasives. The following are typical applications: for volatile li-

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Vortex pumps

quids, gasolene stations, aircraft fuelling for chemicals, as fire pumps or booster pumps in waterworks, for machine tool cooling etc. In the USSR the yearly output of these pumps is 40.000 units with the total power of about 400,000 kW. Experiments show that pressure along the channel increases linearly from suction to delivery. Power is transmitted from the wheel by virtue of its whirling effect and sometimes due to the centrifugal effect. There are hydraulic losses due to friction along the channel and also inlet and outlet losses. Volumetric losses occur due to leakage through the axial clearances and the radial clearance under the cross piece. By taking the moment of forces acting on the liquid in the channel and multiplying by the angular speed of the wheel,

$$\left(p_e - p_H + \frac{T_H}{F}\right) Fu = N_e; \qquad (1)$$

is obtained, where p_e and p_H - pressures at inlet and outlet of the channel; u - tangential speed of the wheel at the center of gravity

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Vortex pumps

of channel cross-section; F - area of channel cross-section. The hydraulic efficiency is

$$\eta_n = \frac{N_{ek}}{N'} = \frac{p_N - p_0}{p_N - p_0 + \frac{T_n N}{F}}.$$

where T_n - tangential drag on channel walls, N_{ek} and N' are net and total hydraulic powers. The momentum theory of vortex pumps, worked out by Schmiedchen (1932) has been verified and explains why large losses are unavoidable. Due to vortex action the liquid leaves the wheel with a high tangential velocity and imparts shock impulse to the slower moving liquid in the channel. The theoretical head which the liquid acquires in passing through the wheel is equal to the sum of dynamic and potential heads. Liquid in the wheel and in the channel moves as one mass and there are no forces to cause axial vortex. The head is therefore equal to zero. As the flow is reduced the difference of tangential velocities on the wheel and in the channel increases. Forces causing axial vortex

Vortex pumps

and the head also increase. This is illustrated in Fig. 11. For pumps of the closed type $N_c = 0$, and the power required is

$$N = N_h + N_{mech} = \frac{FuH}{\eta_{hoi}} + N_{mech}$$

where H - pump head, η_{hoi} - inlet and outlet hydraulic efficiency. Since mechanical losses N_{mech} and almost independent of flow and efficiencies η_h and η_{hoi} are close to 100 %, the dependence of N on H is nearly linear and the angle μ is given by

$$\operatorname{tg} \alpha \sim \frac{dN}{dH} \approx Fu. \qquad (5)$$

In pumps of the open type N_c is small and the above relationship also holds with good accuracy. The total moment of momentum of liquid leaving the wheel per unit time over angle φ_0 is found and

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Vortex pumps

equated to the moment of forces with which the wheel acts on the liquid in the channel (Eq. 1). This gives the pressure head imparted to the liquid by the vortex action. The pump characteristic also depends on the number of blades. The optimum number is that at which the output head is just less than the maximum. Tests also show that other conditions being equal, pressure head is the greater the greater the length (or angle α) of the channel. B.I. Nakhodkin's procedure for pump calculations is then given (Ref. 2: Issledovaniye raboty vikhrevykh nasosov na vode, 1951 (Dissertatsiya MEI)). The laws of similarity are exactly the same as for other bladed pumps working on dripping liquids. Thus specific speed:

$$n_s = \frac{3.65n\sqrt{Q}}{H^{3/4}} \qquad (12)$$

varies between 6 and 50. The pump head is given by

$$H = K\frac{u^2}{2g} \qquad (13)$$

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Vortex pumps

The flow is

$$Q = CFu \qquad (14)$$

where optimum values of C are: .55 to .65 for the closed type pumps and, .50 to .60 for the open type. For bigger pumps with lower hydraulic losses, the higher values of C should be used. The optimum pump ratio N_{opt}/N_{max} (where N_{max} = power at zero flow) varies from 0.3 to 0.5 for the closed type and from 0.4 to 0.6 for the open type pump. Lower values should be used for larger pumps with curved characteristics. The most frequently used channel sections and blade profiles are illustrated. The width of the cross piece should be: L_{cr} = (1.5 to 2) $\cdot$ l (where l - blade pitch) in the open type and L_{cr} = (2 to 3)l in the closed type. The axial clearance varies from .07 to .2 mm per side and the radial clearance from .15 to .3 mm per side. Given optimum flow Q_{opt}, head H_{opt} and speed n calculation procedure is as follows: 1) determine specific speed n_s; 2) optain K_{opt} from tabulated data and knowing H_{opt}

Vortex pumps

evaluate the required radius R_{cg} of the channel center of gravity; 3) from $Q_{opt} = C_{opt} \cdot F_u$ obtain F; 4) using optimum ratios given, determine dimensions of the flow channel; 5) calculate optimum power N_{opt} = etc; 6) find N_{max} and choose the prime mover. The above procedure gives only approximate results. Accurate results are obtained from models by similarity method. Flow regulation can be effected either by throttling or by means of by-passing part of the flow back to inlet. Only the latter method is economic and requires a smaller motor but cavitation properties are worse then in throttling. Cavitation criteria for vortex pumps are the same as for other bladed pumps, namely

$$H_a - H_i^0 = \varphi \frac{c_0^2}{2g} + \lambda \frac{w_0^2}{2g} \qquad (15)$$

and the law of similarity

$$\frac{(H_a - H_i)_1}{(H_a - H_i)_2} = \left(\frac{n_1 D_1}{n_2 D_2}\right)^2, \qquad (16)$$

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Vortex pumps

where $H_a = \frac{p'}{\gamma} - H_o$ - available head at delivery level; p' - absolute pressure at delivery level; H_o - vapor pressure of liquid; H_B - inlet suction head; h_o - losses in suction pipe; v_o and w_o - absolute and relative velocities at entry to wheel (in the suction part); φ - factor taking into account velocity distribution at suction part (equal to 1); λ - cavitation coefficient; λ = .55 to .75 for rectangular blade shape; λ = .4 to .55 for crescent shaped and reverse angle blades; λ = .15 to .4 for centrifugal pumps. The laws of similarity for vortex pumps working on mixtures of gas and liquid are as follows: 1) $Q_{gas}/nD^3 = Q_l$ = const; 2) $h_H - h_{BC}/n^2D^2 = H_l$ = const; 3) R_e = const. There are 2 tables, 42 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

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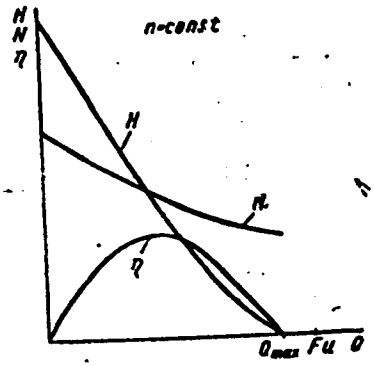
Vortex pumps....

Fig. 11. Vortex pump characterisitc.



Фиг. 11. Характеристика вихревого насоса.

Card 9/9

BAYBAKOV, O.V.; BUTAYEV, D.A.; KAIMYKOVA, Z.A.; PODVIDZ, L.G.; MAR'YANSKIY, L.P., red.; BORUNOV, N.I., tekhn. red.

[Laboratory course in hydraulics and pumping machinery] Laboratornyi kurs gidravliki i nasosov. [By] O.V.Baibakov i dr. Moskva, Gos. energ. izd-vo, 1961. 248 p. (MIRA 15:2)
(Hydraulics) (Pumping machinery)

BAYBAKOV, O.V., kand.tekhn.nauk

Energy treatment of the $\frac{p}{\gamma}$ member of Bernoulli equation. [Trudy] MVTU no.100:155-166 '60. (MIRA 14:4)
(Hydraulics)

ROSHCHIN, K.S.; TSVETKOV, A.I.; SIDNEV, N.F.; TSEGE, A.S.; LIKHACHEV, V.F.; SHIBANOV, K.I.; LEVITINA, Kh.K.; OSTROVKINA, M.Ya.; BAYBAKOV, P.M.; KROL', A.I.

Improvement in the operation of the rectifying devices of electroplating tanks. Prom. energ. 15 no.11:19-20 N '60. (MIRA 14:9)
(Electroplating) (Electric current rectifiers)

ACCESSION NR: AP4042371 S/0056/64/047/001/0073/0079

AUTHORS: Sevast'yanov, B. K; Baybakov, V. I.

TITLE: Anisotropy of magnetic susceptibility of ruby at helium temperatures

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 73-79

TOPIC TAGS: magnetic susceptibility, anisotropy, synthetic crystal, ruby, chromium, corundum

ABSTRACT: By measuring the torque acting on single-crystal ruby samples in a homogeneous magnetic field at helium temperatures, the authors determined the anisotropy of the magnetic susceptibility of artificial single-crystal ruby with Cr^{3+} concentrations from 0.016 to 1.1% by weight. The measurements were made with a magnetic torsion balance described earlier (B. K. Sevast'yanov, PTE, No. 5, 137, 1960) and subsequently improved. The samples were in the form of

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ACCESSION NR: AP4042371

flat rectangular plates 0.5 mm thick and 0.523 cm^2 in area. The concentration of the Cr^{3+} isomorphic ions in the corundum lattice was calculated from the temperature dependence of the anisotropy of the magnetic susceptibility. The concentrations of the Cr^{3+} determined by chemical, magnetic, and optical measurements were compared. A proportionality was found between the optically and magnetically determined concentrations. Since the chemical analysis includes not only the isomorphic ions but all the chromium in the specimen, the value obtained by chemical means systematically exceeds that obtained by magnetic measurements. "The authors are grateful to Doctor N. A. Brilliantov, who suggested the investigation of magnetic properties of ruby, to Professor A. I. Shal'nikov for an opportunity to work at the Cryogenic Division of MGU, to Professor N. Ye. Alekseyevskiy for reading the manuscript and for valuable remarks, and to G. I. Kosourov and G. M. Zverev for a discussion of the work." Orig. art. has: 4 figures and 1 table.

Card 2/ 6

ACCESSION NR: AP4042371

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography, Academy of Sciences SSSR); Moskovskiy gosudarstvenny*y universitet (Moscow State University)

SUBMITTED: 11Feb64 ENCL: 03

SUB CODE: EM, SS NR REF SOV: 004 OTHER: 008

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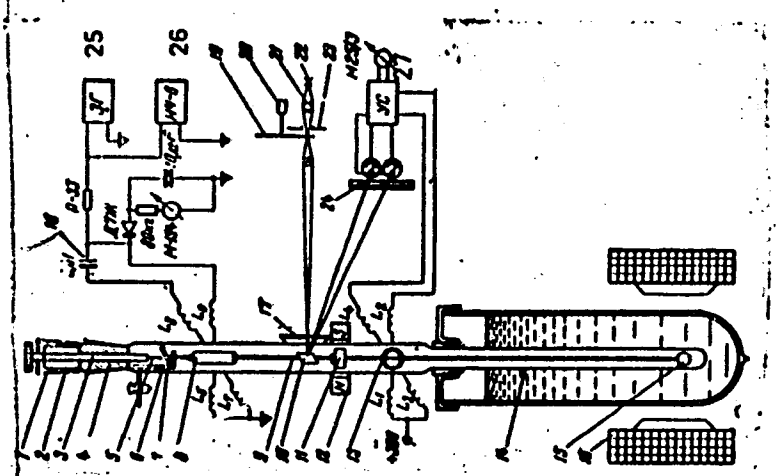
ACCESSION NR: AP4042371 ENCLOSURE: 01



(continued in enclosure #2)

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ACCESSION NR: AP4042371

ENCLOSURE: 02

Block diagram of magnetic balance: 1 - frame of bellows, 2 - bellows, 3 -catch rod, 4 - brass ground joint, 5 - phosphor-bronze filament, 6 - support of catch, 7 - catch, 8 - aluminum cylinder, 9 - quartz rod, 10 - mirror, 11 - damper cylinder, 12 - dc magnet, 13 - aluminum ring, 14 - glass tube, 15 - sample, 16 - electromagnet, 17 - optical window, 18 - phase shifting capacitor, 19 - modulator disc, 20 - modulator motor, 21, 22 - illuminator, 23 - diaphragm, 24 - photocell scale, 25 - audio generator, 26 - frequency meter, 27 - amplifier

(continuation of enclosure #1)

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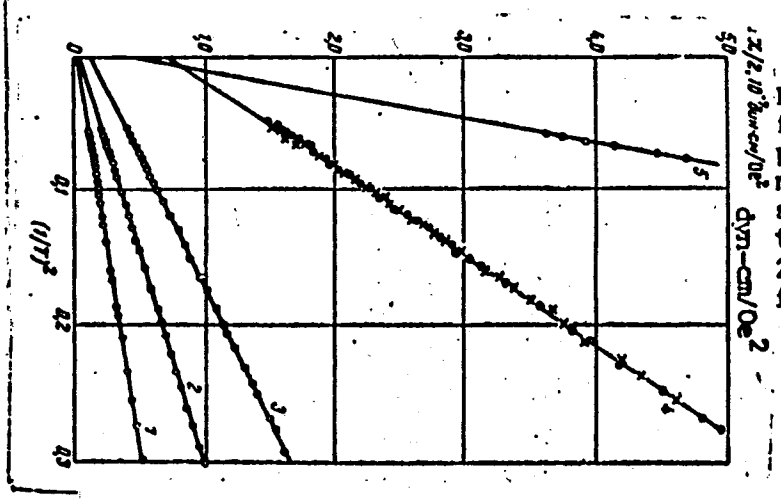
ACCESSION NR: AP4042371

ENCLOSURE: 03



Dependence of the anisotropy factor $\Delta\chi$ on $(1/T)^2$. Curve plotted at $\phi = 15°$ on sample no. 5. curve 4 measured on sample no. 4 at two values of the field, + - -5kOe and o - 2.6 kOe. Curves 1--3 are for asmples 1--3, respectively.

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L 27836-65 EWT(1)/T/EWP(k) Pf-4/Pi-4

ACCESSION NR: AP5005323 S/0181/65/007/002/0655/0656

AUTHOR: Astrov, D. N.; Baybakov, V. I.; Pado, G. S.; Sysoyev, L. A.

TITLE: Amplification of longitudinal ultrasound waves in CdS single crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 655-656

TOPIC TAGS: cadmium sulfide crystal, ultrasound amplification, ultrasound wave, longitudinal wave

ABSTRACT: The amplification of acoustic waves in piezo-semiconductors, under given conditions, was confirmed experimentally by A. R. Hutson and others (Phys. Rev. Lett., 7, 237, 1961) for the case of a transverse ultrasonic wave in CdS crystals. The present article concerns an investigation of the above effect for a longitudinal wave. A delay line, similar to the one described by Hutson, was used. A photosensitive CdS single crystal specimen (5.5 x 5 x 8 mm^3) was fastened to two fused quartz glass shock absorbers, the intermediate layer between the two being indium foil. Quartz piezo-converters were glued to the outside ends of the absorbers. The specimen was oriented so as to permit propagation of the sound wave along the C_6 axis. The incandescent lamp used for illumination made it possible to vary crystal conductance in the range 10^{-8}—2 x 10^{-5} ohm^{-1} cm^{-1}. The coefficient of ab-

Card 1/2